REMARKS

Claims 2, 9, 16, and 22 are cancelled; claims 28-31 are new; thus, claims 1, 3-8, 10-15, 17-21, and 23-31 are all the claims pending in the application. Claims 1-27 stand rejected on prior art grounds and upon Double Patenting. Claims 21-27 stand rejected under 35 U.S.C. §101. Applicants respectfully traverse these rejections based on the following discussion.

I. The 35 U.S.C. §101 Rejection

Claims 21-27 stand rejected under 35 U.S.C. §101 because the Office Action asserts that the claimed invention is directed to non-statutory subject matter. Applicants respectfully disagree with such a conclusion. More specifically, independent claim 21 defines the useful, concrete, and tangible result of "creating a header including said encoded distribution tree". Further, independent claim 21 defines the useful, concrete, and tangible result of "outputting said data packet to said distribution tree". Accordingly, Applicants submit that independent claim 21, and each of the respective claims that depend upon claim 21 (i.e., claims 23-27), produce useful, concrete, and tangible results. In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw this rejection.

II. The Double Patenting Rejection

Claims 1-27 are provisionally rejected on the ground of nonstatutory obviousness-

type double patenting. When the present application and/or the copending application is allowed, Applicants will file a terminal disclaimer in the allowed application in regards to the other application. In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw this rejection.

III. The Prior Art Rejections

Claims 1-2, 4-9, 11-14, 21-22, and 24-27 stand rejected under 35 U.S.C. §102(b) as being anticipated by Crawley, et al. (U.S. Patent No. 5,995,503), hereinafter referred to as Crawley. Claims 3, 10, 15-20, and 23 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Crawley, in view of Mittra (U.S. Patent No. 5,748,736). Applicants respectfully traverse these rejections based on the following discussion.

The claimed invention provides a method for establishing transmission headers for stateless group communication of data packets to nodes in a distribution tree. The method begins by encoding the distribution tree to produce an encoded distribution tree. Next, a header is created including the encoded distribution tree. Then the header is added to a data packet to be distributed to the distribution tree.

In the rejection, the Office Action argues that the prior art of record discloses many features of the claimed invention. However, the "ERA header" of Crawley (which the Office Action asserts teaches the "header" of the claimed invention) does not include an encoded distribution tree. Rather, the encoded distribution tree in Crawley is positioned in the "body" of the ERA. Furthermore, the ERA header of Crawley is not

added to a data packet to be distributed to the distribution tree. Instead, the data packets do not require information from the ERA headers regarding the routing path. In addition, the prior art of record does not teach or suggest "stateless" group communication. Instead, the prior art references teach "stateful" group communication. Therefore, as explained in greater detail below, Applicants respectfully submit that the prior art of record does not teach or suggest the claimed invention.

Applicants traverse the rejections because the prior art of record fails to teach the claimed features of "adding said header to a data packet to be distributed to said distribution tree". Such features are defined in independent claims 1, 8, 15, and 21 using identical language. On page 7, item 11 of the Office Action, the Office Action argues that such features are taught by Crawley.

First of all, the Office Action argues that the "explicit routing advertisement (ERA) header" of Crawley teaches the "header" of the claimed invention (Office Action, p. 7, item 11). However, unlike the claimed "header" of the claimed invention, the "ERA header" of Crawley does not include an encoded distribution tree (independent claims 1, 8, 15, and 21). Instead, in Crawley, the encoded distribution tree is positioned in the "body" of the ERA.

Furthermore, nothing within Crawley teaches or suggests that the ERA header (or the ERA body) is added to a data packet to be distributed to the distribution tree (independent claims 1, 8, 15, and 21). Although the ERA header of Crawley "contains information that identifies a particular data flow" (Crawley, col. 10, lines 43-44), the

ERA header is not added to a data packet. In Crawley, data packets do not require information from the ERA headers regarding the routing path. This is because the routing path has already been established *prior* to the initiation of the data flow in Crawley.

Accordingly, Applicants submit that the "ERA header" of Crawley (which the Office Action asserts teaches the "header" of the claimed invention) does not include an encoded distribution tree. Rather, the encoded distribution tree in Crawley is positioned in the "body" of the ERA. Furthermore, the ERA header of Crawley is not added to a data packet to be distributed to the distribution tree. Instead, the data packets do not require information from the ERA headers regarding the routing path. Therefore, it is Applicants' position that the prior art of record fails to teach the claimed features of "adding said header to a data packet to be distributed to said distribution tree" as defined in independent claims 1, 8, 15, and 21.

In addition, Applicants traverse the rejections because the prior art of record fails to teach the claimed features of "establishing transmission headers for stateless group communication of data packets to nodes in a distribution tree ... wherein said nodes in said distribution tree lack group state information". Such features are defined in independent claims 1, 8, 15, and 21 using identical language.

Applicants submit that the prior art of record does not teach or suggest "stateless" group communication; rather, the prior art references teach "stateful" group communication.

To the contrary, as described in paragraph 0018 of the claimed invention, some

protocols maintain state information at the nodes involved in a group communication session. The invention provides group communication by fully encoding communication trees at the sender to allow stateless operation. One of the advantages of stateless group communication comes from reducing the signaling of the control path. The second is the added flexibility of dynamic modification of communication trees.

As further described in paragraph 0023 of the claimed invention, in order to perform application level forwarding without maintaining group communication states at intermediate nodes participating in the forwarding, the full distribution tree is encoded at the sender and included in each transmitted packet.

Accordingly, Applicants submit that the prior art of record does not teach or suggest "stateless" group communication. Instead, the prior art references teach "stateful" group communication. Therefore, it is Applicants' position that the prior art of record fails to teach the claimed features of "establishing transmission headers for stateless group communication of data packets to nodes in a distribution tree … wherein said nodes in said distribution tree lack group state information" as defined in independent claims 1, 8, 15, and 21.

Therefore, it is Applicants' position that the prior art of record does not teach or suggest many features defined by independent claims 1, 8, 15, and 21 and that such claims are patentable over the prior art of record. Further, it is Applicants' position that dependent claims 3-7, 10-14, 17-20, and 23-31 are similarly patentable, not only because of their dependency from a patentable independent claims, but also because of the

additional features of the invention they defined. In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw the rejections.

IV. Formal Matters and Conclusion

In view of the foregoing, Applicants submit that claims 1, 3-8, 10-15, 17-21, and 23-31, all the claims presently pending in the application, are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary. Please charge any deficiencies and credit any overpayments to Attorney's Deposit Account Number 50-0510.

Respectfully submitted,

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